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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,897	12/16/2005	Masayuki Yabuki	269077US0PCT	2267
22850	7590	12/11/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER MA, JAMESON Q	
			ART UNIT	PAPER NUMBER
			1797	
			NOTIFICATION DATE	DELIVERY MODE
			12/11/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/529,897

Applicant(s)

YABUKI ET AL.

Examiner

JAMESON Q. MA

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 16-36 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 and 16-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date 20090805
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg et al. (US 2003/0100842) in view of Labows et al. (Axillary Odor: determination, formation and control) and Natsch et al. (US 7,264,956).

Regarding claim 31, Rosenberg discloses a method for indicating a level of bad breath (oral malodor), see [0005]. Rosenberg discloses that a practical problem is that oral malodor measurements are not reliable. Rosenberg further discloses that bad breath is measured by the level of halitosis (bad breath) was measured by taking a sample of saliva and subjecting the saliva to a colorimetric test for a compound correlated to bad breath. This colorimetric test is then compared to a standard color scale to determine the level of bad breath, see [0013-0018] and [0031-0032].

Rosenberg fails to disclose the use of a beta hydroxycarboxylic acid in the method.

Labows teaches that in body odor perception, the absolute threshold (the lowest concentration perceived) can be used to determine the relative sensitivity of individuals to odorants. Labows further teaches that in many situations, individuals do not perceive, and thus may not be able to interpret human odors in the same manner, see P10/Paragraph A. Labows further discloses that humans have anosmias (lack of

olfaction) to many types of odors including axillary, foot, breath, and semen (see Table 2).

Natsch discloses that 3-hydroxy-3-methylhexanoic acid has a pungent odor, and is a key malodour volatile in human sweat (see C3/L18-25).

It would have been obvious to one of ordinary skill in the art at the time of invention to use the method taught by Rosenberg to indicate a level of axillary odor in a colorimetric method because as taught by Labows, the relative characterization of axillary odor by individuals suffers from a similar lack of reliability due to individual variances and anosmias as the oral malodors taught by Rosenberg. It further would have been obvious to one of ordinary skill in the art to select 3-hydroxy-3-methylhexanoic acid as the representative axillary odorant, because doing so would have resulted in nothing more than the selection of a finite number of identified and predictable axillary odorants as set forth by both Labows and Natsch

For claims 32 and 33, modified Rosenberg does not disclose that the beta hydroxycarboxylic acid is separated from a fatty acid having 12 or less carbons, and that the separated mixtures are separately subjected to a coloring reagent and that the assessment of the kind of body odor is exhibited from both reactions. However, Labows teaches that different axillary odorants have different primary odors such as urinous, musky, sweaty, or hircine (see Table 2). Labows teaches that 3-hydroxy-3-methylhexanoic acid and fatty acids having less than 12 carbons can be present in the same sample of axillary sweat (see Table 2). It would have been obvious to one of ordinary skill in the art at the time of invention to isolate the different axillary odorants

taught by Labows, and subject each isolate to a colorimetric test in order to further determine the specific levels of ruinous, musky, sweaty and hircine odorants as taught by Labows.

3. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg et al. (US 2003/0100842) in view of Labows et al. (Axillary Odor: determination, formation and control) and Natsch et al. (US 7,264,956) as applied to claims 31-33 above, and further in view of Hör et al. (Absolute configurational assignment of acyclic hydroxyl carboxylic acids: a new strategy in exciton-coupled circular dichroism).

Regarding claims 34-36, modified Rosenberg discloses all of the claim limitations set forth above. The reference does not explicitly disclose that the coloration reagent comprises a hydrazino or a diazomethyl group. Modified Rosenberg is directed to the colorimetric analysis of fatty acids contributing to malodor.

Hör teaches that the fluorescent chromophore 9-anthryldiazomethane was developed as a fluorescent marker for the HPLC analysis of fatty acids with can be stored for several months and used whenever needed. Further, the reaction is easily followed by a color change from red to yellow.

It would have been obvious to one of ordinary skill in the art at the time of invention to use 9-anthryldiazomethane as the colorimetric reagent in the method of modified Rosenberg in order to provide a colorimetric reagent that was readily reactive to fatty acids, which could be stored for long periods of time, and that would allow for a quick qualitative determination of body odor, as taught by modified Rosenberg and Hör.

Response to Arguments

4. Applicant's arguments filed 8/5/09 have been fully considered but they are not persuasive. Applicant's arguments with respect to the mercapto alcohol compound and the compound represented by formulas (3) and (4) are rendered moot by applicant's cancellation of claims 8-10.

Applicant asserts that Rosenberg is directed to an indirect gauge of malodor and that 3-hydroxy-3-methylhexanoic acid has not been identified as an indirect gauge of malodor. In response, it is noted that 3-hydroxy-3-methylhexanoic acid has been identified as a key malodor volatile in human sweat (Natsch, C3/L18-25), which would make it an even more pertinent and representative compound to use in a test that is measuring malodor. Applicant argues that Natsch does not disclose that 3-hydroxy-3-methylhexanoic acid and other fatty acids produce different types of malodor. It is noted that such a distinction is found in the Labows reference as cited above.

5. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMESON Q. MA whose telephone number is (571)270-7063. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Marcheschi can be reached on (571)272-1374. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Marcheschi/
Supervisory Patent Examiner, Art
Unit 1797

JM
December 5, 2009